IN THE CLAIMS:

Please cancel claims 1-7, 10-11 and 14-15 without prejudice or disclaimer of the subject matter contained therein.

Please amend the claims as follows:

8. (Amended) A catalyst for addition polymerization obtained by contacting (A) a compound containing an atom of the Group II to the Group XII or Lanthanide series of the Periodic Table of the Elements, in which the lowest energy level of unoccupied molecular orbital having the valence p-type atomic orbital of the atom of the Group II to the Group XII or Lanthanide series as a main component wherein the coefficient represented by a linear combination is 0.4 or more is calculated to be 0.008 atomic unit (Hartree) or less by the calculation of density functional method (B3LYP/3-21G level) and wherein the compound (A) is a porphyrin or phthalocyanine complex in which a metal atom of the Group II to the Group XII is coordinated, a metal compound (B) selected from the group consisting of compounds represented by the general formula [4]:

$$L_a M^1 X_b \qquad [4]$$

wherein M^1 is a metal atom of the Group III to the Group XIII or Lanthanide series; L is a group having cyclopentadienyl type anion skeleton or a group containing a hetero atom, a plurality of L's may be linked directly, or through a residual group containing a

carbon atom, a silicon atom, a nitrogen atom, an oxygen atom, a sulfur atom or a phosphorous atom; X is a halogen atom or a hydrocarbon group; "a" represents a number satisfying $0<a\leqq 8$; and "b" represents a number satisfying $0<b\leqq 8$ and μ-oxo type compounds thereof.

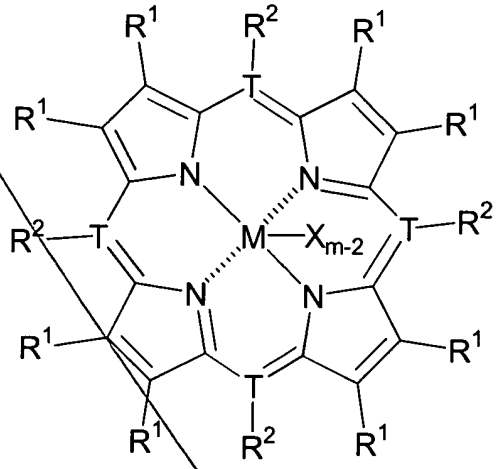
9. (Amended) A catalyst for addition polymerization obtained by contacting (A) a compound containing an atom of the Group II to the Group XII or Lanthanide series of the Periodic Table of the Elements, in which the lowest energy level of unoccupied molecular orbital having the valence p-type atomic orbital of the atom of the Group II to the Group XII or Lanthanide series as a main component wherein the coefficient represented by a linear combination is 0.4 or more is calculated to be 0.008 atomic unit (Hartree) or less by the calculation of density functional method (B3LYP/3-21G level) and wherein the compound (A) is a porphyrin or phthalocyanine complex in which a metal atom of the Group II to the Group XII is coordinated, a metal compound (B) selected from the group consisting of compounds represented by the general formula [4]:

$$L_a M^1 X_b \qquad [4]$$

wherein M^1 is a metal atom of the Group III to the Group XIII or Lanthanide series; L is a group having cyclopentadienyl type anion skeleton or a group containing a hetero atom, a plurality of L's

may be linked directly, or through a residual group containing a carbon atom, a silicon atom, a nitrogen atom, an oxygen atom, a sulfur atom or a phosphorous atom; X is a halogen atom or a hydrocarbon group; "a" represents a number satisfying $0<a\leqq 8$; and "b" represents a number satisfying $0<b\leqq 8$; and μ-oxo type compounds thereof, and an organoaluminum compound (C).

12. (Amended) The catalyst according to claim 8, the compound (A) is a compound represented by the general formula [1]:

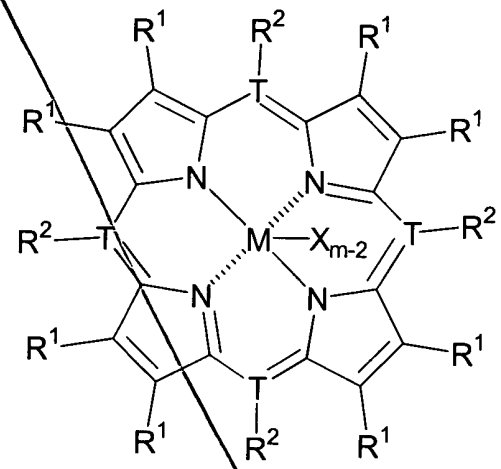


[1]

wherein M represents an atom of the Group II to the Group XII or Lanthanide series of the Periodic Table, T represents an atom of the Group XIV or Group XV of the Periodic Table, and all of T's may be mutually the same or different, each of R^1 and R^2 independently is a hydrogen atom, a halogen atom, a hydrocarbon group or a halogenated hydrocarbon group, all of R^1's and all of R^2's may be mutually the same or different, and may mutually form a ring, provided that at least one of R^1 and R^2 in the general formula [1]

is an electron withdrawing group; X represents a hydrogen atom, a halogen atom, a hydrocarbon group or a hydrocarbon oxy group, and when a plural number of X's exist, they may be mutually the same or different, m represents a valence of M.

13. (Amended) The catalyst according to claim 9, the compound (A) is a compound represented by the general formula [1]:



[1]

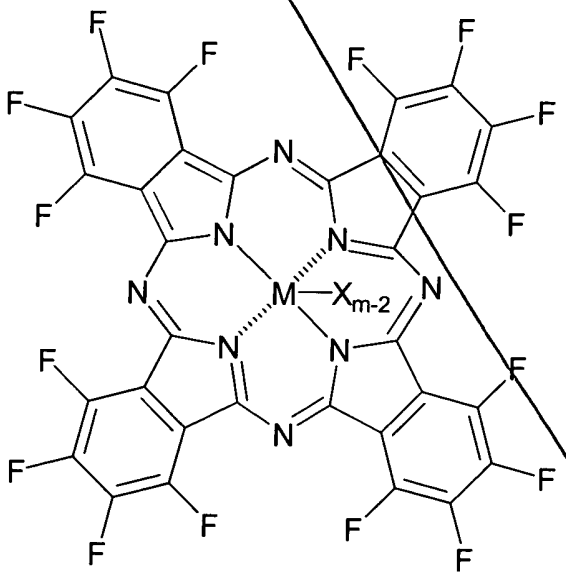
wherein M represents an atom of the Group II to the Group XII or Lanthanide series of the Periodic Table, T represents an atom of the Group XIV or Group XV of the Periodic Table, and all of T's may be mutually the same or different, each of R^1 and R^2 independently is a hydrogen atom, a halogen atom, a hydrocarbon group or a halogenated hydrocarbon group, all of R^1's and all of R^2's may be mutually the same or different, and may mutually form a ring, provided that at least one of R^1 and R^2 in the general formula [1] is an electron withdrawing group; X represents a hydrogen atom, a

halogen atom, a hydrocarbon group or a hydrocarbon oxy group, and when a plural number of X's exist, they may be mutually the same or different, m represents a valence of M.

16. (Amended) The catalyst according to Claim 12, wherein the electron-withdrawing group is a fluorine, chlorine or bromine atom.

17. (Amended) The catalyst according to Claim 13, wherein the electron-withdrawing group is a fluorine, chlorine or bromine atom.

18. (Amended) The catalyst according to Claim 16, wherein the compound is a compound represented by the general formula [2]:

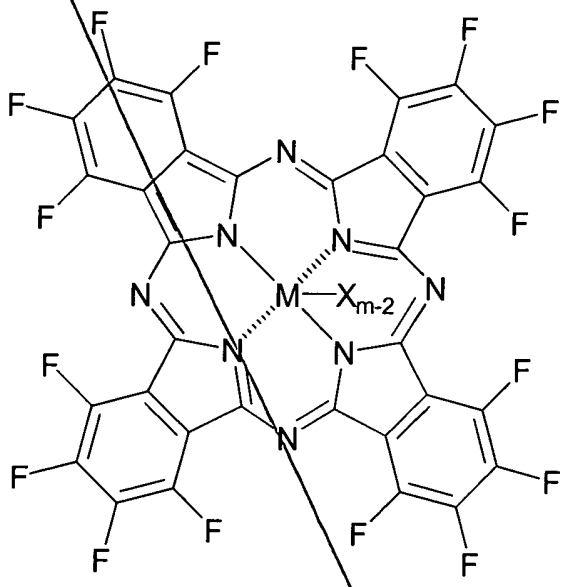


[2]

wherein M represents an atom of the Group II to the Group XII excluding Cu or Lanthanide series of the Periodic Table, X

represents a hydrogen atom, a halogen atom, a hydrocarbon group or a hydrocarbon oxy group, and when a plural number of X's exist, they may be mutually the same or different, m represents a valence of M.

19. (Amended) The catalyst according to Claim 17, wherein the compound is a compound represented by the general formula [2]:



[2]

wherein M represents an atom of the Group II to the Group XII excluding Cu or Lanthanide series of the Periodic Table, X represents a hydrogen atom, a halogen atom, a hydrocarbon group or a hydrocarbon oxy group, and when a plural number of X's exist, they may be mutually the same or different, m represents a valence of M.